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Telecom Penetration in Rural India: Present Scenario, Future Challenges and Prospects

Swati[1] and Bhanu Pratap[2]

[1]Research Scholar, Post Graduate Department of Commerce and Management
Veer Kunwar Singh University, Ara (Bihar)
[2]Post Graduate Student, Post Graduate Department of Political Science
H.D Jain College, Veer Kunwar Singh University, Ara (Bihar)

Abstract: Telecommunication Industry is the fastest growing industry in the world. It has a mobile subscriber base of 680 million out of which 68 percent subscribers are from urban areas and the remaining 32 percent is from rural areas. The urban teledensity has reached its saturation point. So, the chances of further growth are more in rural areas. Rural India has undoubtedly immense number of potential telecommunication users. Expansion of telecommunication services in rural areas will strengthen the network and will enable delivering multiple services in communication starved rural areas. Since the prices of both the wireless telephony and communication devices have come down due to overall growth of the industry, there is a huge demand for telecommunication services in rural areas also. In this article an attempt is made to analyse the present dynamics of the telecommunication penetration in rural India along with the further scope of its penetration involving a large number of private firms and also the challenges involved in it.

Keywords: Telecommunication, Rural, Teledensity, Wireless, Challenges, Telephone

Introduction:

Census of India defines rural area as any habitation with a population density less than 400 per sq. km., where at least 75 percent of the male working population is engaged in agriculture and where there exist no municipalities or board. According to census 2011 out of 121 crore Indians 83.3 crore live in rural areas and only 37.7 crore Indians reside in the urban areas.[1] India with robust GDP and a Healthy economy is developing as a major power house in Asia.[2] Moreover due to several efforts made by the Government of India the benefits of economic development to rural areas are percolating slowly but steadily. Hence there is vast potential for penetration by different firms engaged in manufacturing different goods or in providing a wide variety of services.

Core sectors of the economy which includes telecom are said to have a direct bearing on transforming consumers into producer and promote economic development.[3] A number of studies have documented the positive impact of mobile phone adoption on rural development.[1]Telecom services would fall in the mid-space of the matrix of development versus profitability by serving low income consumers. Such developments will be beneficial for a developing country like India as it can play the role of the catalyst to intensify the overall development of rural India.

Before discussing the current scenario and future situation, it is necessary to shed some light on the history of Telecommunication in India because exploring the past helps us to understand the present and shape the future.

The Indian Telecom Journey had a modest beginning with the setting up of the first experimental electric Telegraph line between Calcutta and Diamond harbour in 1851. Subsequently the telephone services were offered to the general public from 1881 onwards.[2] India's tele-density in 1948 was 0.02 per cent. The telecom

[1] Census Report 2011
[2] Vishnu Verma, "India to be world's largest economy by 2030", Indian Express, June 25 2015. Retrieved July 5, 2015, from http://indianexpress.com/article/india/india-to-be-worlds-third-largest-economy-by-2030-study/

[3] Case Study: India, ENABLING RURAL INDIA WITH COMMUNICATION AND INFORMATION TECHNOLOGY INITIATIVES *"INTERNATIONAL TELECOMMUNICATION UNION and KOREA AGENCY FOR DIGITAL OPPORTUNITY AND PROMOTION"* , AUGUST 2004, p.15
[4] S. Bhatnagar, "Enhancing telecom options in rural India: Some options", *India Telecom Conference*. Stanford (2000)

industry was for the exclusive preserve of the public sector. All Five Year Plans and successive governments placed strong emphasis on telecom development. Yet in 1998, the tele-density was only 1.94 per cent, displaying an incremental growth of 1.92 per cent in the fifty year period post-Independence, indicating an average yearly growth of 0.04 per cent.[3] The reason behind this slow growth was that, till the mid 1990s, Telecommunication in India was controlled by the state-run operators Bharat Sanchar Nigam Limited (BSNL) and later by Mahanagar Telephone Nigam Limited (MTNL) by launching internet service in August 1995. The state-owned Organisations held a monopoly over their sections for a long time till the National Telecom Policy 1994 (NTP 94) allowed the entry of private players into the Telecom Sector.[4]

NTP paved the way for the introduction of mobile telephony in India.[5] The Telecom Regulatory Authority of India TRAI was established in 1997 to reduce the Government control regarding the fixing of tariff rates and intruding in telecom policy matters. Although mobile telephones followed the New Telecom Policy 1994, growth was tardy in the early years because of the high prices of handsets as well as the high tariff structure of mobile telephones. With, the New Telecom Policy in 1999, the industry heralded several pro-consumers initiatives. Mobile subscriber additions started picking up.

Apart from this, to give impetus to the rural telephony, the Government in June, 2002 established a Universal Service Obligation Fund (USOF) by an Act of Parliament. Subsequently the scope of USOF was widened to provide subsidy support for enabling access to all types of telegraph services including mobile services, broadband connectivity and creation of infrastructure like optical fiber in rural and remote areas.[6] Therefore, various

schemes have been launched by USOF for provision of telecom services in rural and remote areas of the country. Besides this in the area of rural telephony BSNL was the market leaders in the fixed line segment (TRAI). Private players had very marginal share in the rural market segment, mostly in the mobile telephony segment in which Airtel was the market leader.

[6] TRAI ANNUAL REPORT 2013- 2014, P.5

[7] BS Reporter, "Rural spending outpaces urban consumption", Business Standard, August 30 2012, Retrieved May 4, 2015, from http://wap.business-standard.com/article/finance/rural-spending-outpaces-urban-consumption-112083002018_1.html

PRESENT SCENARIO:

Since 2010 various economy related changes have taken place which had a serious effect on the penetration of telecommunication in rural India Take for example the research report of Crisil Research (2012) which stated that the rural spending out spaced the urban consumption up to 2012, first time in nearly 25 years. This increase according to Crisil was fuelled by a strong increase in incomes, led by rising non-farm employment opportunities and the Government's focus on rural employment generation schemes. This sudden increase in purchasing power had multiplier effect as the rural consumption shifted from necessities to discretionary goods.[7] This phenomenon to some extent was exploited by Mobile manufacturing companies as well as companies engaged in providing Telecom services. The data given below shows the number of rural telephones in millions at the end of March of the given year.

Item	2011	2012	2013	2014
Wire line telephone	34.73	32.17	30.21	28.50
Wireless telephone	811.60	919.17	867.81	904.52
Total phones	282.29	330.83	349.21	377.78

Source: Annual Report 2013-2014 Department of Telecommunications Ministry of Communications & Information Technology, Government of India

Thus it is clear from the above data that while the wireless telephones continued to grow, the landline telephones kept declining. The number of landline telephones, which was 30.21 million in the beginning of the year 2013- 14 declined to 28.50 million at the end of March 2014. On the other hand the number of wireless telephones increased from 867.81 million to 904.52 million during this period. As a result, the share of wireless telephones increased from 96.64 per cent as on 01.04.2013 to 96.95 per cent as on 31.03.2014. Various factors are responsible for this increase in the wireless telephones in rural areas. Firstly it is the increase in the purchasing power of the rural people explained above. The second could be the rolling in of the large number Private Telecom Service Providers to tab the unsaturated and less explored rural market where the competition is not cut-throat as it is among the Telecom Service Providers in urban areas in India. Last but not the least the mobility of wireless phones makes it easier for the rural consumers to carry it with them even on their sight of work.

The Tele-density which denotes the number of telephones per 100 population has also increased. The tele-density which was 33.83 at the end of

March 2011 rose up to 44.01 at the end of March 2014.[8] It is an indicator of telecom penetration in the country. Moreover it is also a sign of economic development of a country. As according to a McKinsey study a 10% increase in tele-density contributes to 0.6% of GDP growth. The data given below shows the trend of Tele-density at the end of March of the given years.

	2011	2012	2013	2014
Tele-density per 100 persons	33.83	39.26	41.05	44.01

Source: Annual Report 2013-2014 Department of Telecommunications Ministry of Communications & Information Technology, Government of India

Apart from tele-density the penetration of telecom in the rural areas is also evident from the fact that many Private Telecom service providers have already set foot in the rural consume rmarket. The following data of TRAI on Service Provider-wise Rural Wireless Subscribers and Market Share in 2012-2013 will make this point more clear.

Wireless Group	Rural Subscribers as on March 2012 in millions	Rural Subscribers as on March 2013 in millions	Market share of Rural Subscribers as on March 2012	Market share of Rural Subscribers as on March 2013
Bharti	75.83	82.16	23.46	23.99
Vodafone	62.84	82.29	19.44	24.02
Reliance	34.02	29.34	10.52	8.57
Idea/Spice	60.51	65.78	18.72	19.21
BSNL	34.53	34.84	10.68	10.17
TATA	16.70	13.78	5.17	4.02
Aircel	22.54	22.33	6.97	6.52
Unitech	12.11	10.04	3.75	2.93
Sistema	2.61	1.93	0..81	0.56
MTNL	0.00	0..00	0.00	0.00
Loop	0.00	0.00	0.00	0.00
Videocon	0.00	0.00	0.00	0.00
Quadrant	0.00	0.04	0.00	0.01
S Tel	1.58	0.00	0.49	0.00
Etisalat	0.00	0.00	0.00	0.00
TOTAL	**323.27**	**342.50**	**100.00**	**100.00**

Source: Telecom Regulatory Authority of India Annual Report 2012-2013

From the above data it is clear that Vodafone has the largest number of rural subscribers and subsequently the largest market share of rural India followed by Bharti Airtel and Idea respectively. Earlier as per TRAI Annual Report 2009 Airtel was the market leader in the Rural wireless Telecom sector. But now Vodafone is the market leader in the rural wireless telecom sector. But in the rural wire line Telecom sector BSNL continues to maintain its dominance with 6.65 million subscribers till the end of March 2013. There are only two private players in the rural wire line telecom sector with very little share of subscribers. These are Sistema Shyam and Reliance with 0.1 million subscribers and 0.002 million subscribers respectively.

UNIVERSAL SERVICE OBLIGATION FUND AND TELECOM PENETRATION:

The Universal Service Obligation Fund (USOF) was established with the fundamental objective of providing access to basic telegraph services to people in the rural and remote areas at affordable and reasonable prices. Subsequently the scope was widened to provide subsidy support for enabling access to all types of telegraph services including mobile service3s, broadband connectivity.[9] Under the aegis of USOF various schemes for the telecom penetration in rural India like National Optical Fibre Network Scheme;[10] connecting all Gram Panchayats in the country through optical fibre utilizing existing fibres of PSUs via BSNL, RailTel and Power Grid and laying incremental fibre where ever necessary to bridge the connectivity gap between Gram Panchayats and Blocks have been operational. Similarly another scheme by the name of 'Rural Broadband Scheme for expanding

[8] Pradip Balaji & Rekha Jain, "Rural Telecom", *India Infrastructure Report*, 2007, p.76, Retrieved June 10, 2015, from http://www.iitk.ac.in/3inetwork/html/reports/IIR2007/04-Rural%20Telecom.pdf

[10] Ibid.

[11] TRAI ANNUAL REPORT 2013-2014,P.5

[12] BS Reporter, "Rural spending outpaces urban consumption", Business Standard, August 30 2012, Retrieved May 28, 2015, from http://wap.business-standard.com/article/finance/rural-spending-outpaces-urban-consumption-112083002018_1.html

provision of Wire line Broadband Connectivity up to village level' has also been operational under the aegis of USOF. Thus USOF has a greater role to play in the penetration of telecom sector in rural India because basic telecom infrastructure like optical fibre connection and shared mobile infrastructure provide a firm foundation and basic infrastructure to the private telecom service providers to invest in the rural telecom sector.[11]

Besides this "The Sanchar Shakti" pilot scheme for Mobile Value Added Services (VAS) provisioning envisages development of content/information customized to the requirements of women SHG members engaged in diverse activities in rural areas across India. The scheme entails innovative application of technology in designing and delivering the VAS content so as to ensure its easier accessibility and effective assimilation among the targeted women beneficiaries.[12]

CHALLENGES AND FUTURE PROSPECTS:

Despite the robust growth in the investment in the rural telecom sector involving both the government and the private players there exist challenges that need to be tackled to allow the Telecom to penetrate further in rural India.

The first challenge is the different profiles of rural customers. Each of these diverse sections of rural India is embedded in its customs and traditions, which in turn have a deep impact on the psyche of the people.[13] Every aspect of their lives from birth, to education, to marriage, to livelihood is influenced by the deeply imbedded traditions. Rural marketers have been able to understand and often utilize these diversities and traditions.[14] Even the level of infrastructure provided in different regions varies a lot. The diversity in terrain adds to the already varied lifestyle and livelihood of people there. Therefore no marketer can follow a uniform marketing strategy throughout India.[15]

Apart from this, a report jointly prepared by the Federation of Indian Chambers of Commerce and Industry (FICCI) and global consultancy KPMG mentioned few more challenges in the form of difficulty in the acquisition of rural consumers due to the low affordability of telecom services, the low average revenue per user (ARPU), lack of locally relevant content and the prevalent literacy levels.[16] Further there is also the problem of regional disparities in the electrification of villages. According to Census report 2011 43.2% of the rural population still depend on kerosene for the source of power and only 55.3% of the rural population has access to electricity marred by regional disparity; for e.g. the percentage of electrified villages in Sikkim, Punjab and Kerala is 100 while 81-90% of the villages have been electrified in Jharkhand and Uttar Pradesh.[17] This discourages the private players to come forward to invest in rural telecom sector as the cost of their operation will increase in non- electrified villages.[18]

Apart from this Though the cost of owning and using telecom equipment and services has come down considerably in the last few years, the rural consumer still finds it hard to put aside money for "discretionary spend". To overcome this challenge, the report suggested that micro-financing could provide a possible solution.[19]"Tie-ups with state-owned banks could enable the rural consumers to purchase telecom equipment and services at affordable rates," it said. The rural ARPU is not expected to be driven solely through voice services. The availability of data services is expected to have a positive impact on the rural ARPUs, FICCI said. [20]The report also cited lack of locally relevant content for restricting rural telecom. To increase adoption, the report stated that it was essential to develop services like news in local language, weather alerts for fishermen, and comparative 'mandi' rates, among other services.[21]

The rural India with 83.3 crore population provides an opportunity to state and private players in telecom sector to diversify their business by investing in rural telecom sector. Moreover if the above mentioned challenges are met the rural India can become a huge platform for competition between the private players to acquire and to be dominant in a dominant position in the rural telecom market. This will benefit the rural Indian

[1 3] TRAI Annual Report 2013-2014,p.3
[1 4] TRAI Annual Report 2013-2014, p.40
[1 5] Ibid
[16] TRAI Annual Report 2013-2014, p.41
[17] Ibid
[18] Brijesh H Joshi & Apurva B Mehta & Bhautik A. Patel and Kalpesh Patel, "Usages Of Mobile Phone By Rural Consumers: With Special Reference To Collegian Students of Palanpur" , *Shiv Shakti*: *An International Journal of Multidisciplinary And Academic Research*, Vol.1, No.2, p.2

[19] Ibid.
[20] Ibid.
[21] "Telecom penetration in rural India faces challenges", The Hindu, 29 November 2009, Retrieved May 21, 2015, from http://m.thehindu.com/business/Industry/telecom-penetration-in-rural-india-faces-challenges/article56932.ece

consumers in the years to come as the basic economic principle tells us that when there is a competition between multiple producers in the market for the same product the price naturally comes down whose ultimate beneficiary is the consumer himself. Thus it will lead to further diversification of the rural telecom sector and it's in depth penetration into rural India. Moreover the farmers engaged in agriculture which is the backbone of our country can be its true beneficiary as the penetration of telecom especially the wireless telephone will enable the farmers to utilize the Kisan portal stated by the Government of India adhere to the various queries of the farmers related to agriculture which will be useful to the farmers in the long run. Thus, empowering the farmers of rural India with the power of knowledge, reducing apathy and ignorance which had marred them since Independence.

CONCLUSION:

Rural India not only suffers from the improper transportation and infrastructural facilities but they are deprived of telecommunication services as well. This is intensifying the economic inequality which is already in confounding proportion. From the above discussion, it can be concluded that if the above mentioned challenges are addressed and resolved, then the telecom penetration in rural India will witness a revolutionary era with a large number of private players competing amongst themselves for acquiring a large share of the rural market benefitting the rural consumers. As the basic principle of economics, mentioned earlier, states that the presence and competition amongst a large number of producers producing the good will ultimately bring down the price benefitting the consumers. Hence, the current requirement is to find an apt solution of the challenges for furthering the goal of telecom penetration in rural India on a massive scale which would not only help rural consumers getting goods and services at a very low price but it would also address the economic problem of our country by providing better delivery of public services and by creating new sources of employment and income particularly for the poor people.

References:

Census Report 2011, p.3-7.

TRAI ANNUAL REPORT 2013-2014,p.5.

TRAI Annual Report 2013-2014, p.41.

Verma.Vishnu, "India to be world's largest economy by 2030", Indian Express, June 25 2015. Retrieved July 5, 2015, from http://indianexpress.com/article/india/india-to-be-worlds-third-largest-economy-by-2030-study/

S. Bhatnagar, "Enhancing telecom options in rural India: Some options", *India Telecom Conference*. Stanford (2000).

BS Reporter, "Rural spending outpaces urban consumption", Business Standard, August 30 2012, Retrieved May 28, 2015, from http://wap.business-standard.com/article/finance/rural-spending-outpaces-urban-consumption-112083002018_1.html.

Joshi, H. Brijesh., Mehta, B. Apoorva., Patel, A. Bhautik., & Patel. Kaplesh. "Usages Of Mobile Phone By Rural Consumers: With Special Reference To Collegian Students of Palanpur", Shiv Shakti: An International Journal of Multidisciplinary And Academic Research, Vol.1, No.2, p.2.

"Telecom penetration in rural India faces challenges", The Hindu, 29 November 2009, Retrieved May 21, 2015, from http://m.thehindu.com/business/Industry/telecom-penetration-in-rural-india-faces-challenges/article56932.ece.